

## CONTACT WIRE DE-ICING



### TRAIN AND TRAM

The ice formation of the overhead contact lines during the winter months is a problem for many transport services. The reduced conductivity can produce electric arcs which may lead to burning out of the contact wire and collect strip. Very thick ice can stop the current flow completely so that no traffic can occur. In either case costs can be substantial.

#### *The System*

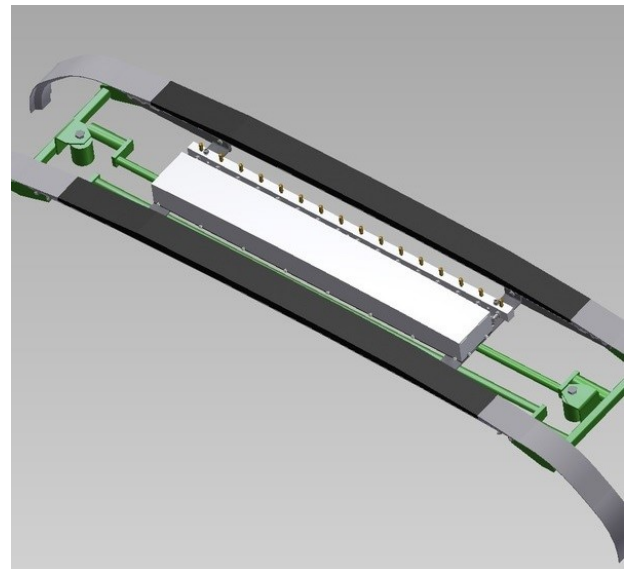
The newly developed contact wire de-icing system is able to detect the position of the contact wire during operation. Then a proximity switch only triggers the spray nozzles which are located directly underneath the contact wire. As a result, the Pantotec DK is sprayed precisely onto the contact wire.

The well-proven Turbolub distributor guarantees that the antifreeze is evenly distributed among the nozzles in action.

This system is suitable for the defrosting of all wires exposed to the weather.

#### *Advantages of contact wire de-icing*

- ✔ Reliable prevention of overhead contact wire icing
- ✔ Reduction of wear and damage to pantographs
- ✔ Significant increase in reliability of rail operation
- ✔ Monitoring options for maximum process reliability
- ✔ Environment-friendly thanks to high efficiency of system
- ✔ No wear of de-icing system caused by friction as a result of contactless application
- ✔ Quick pay-back due to lower variable costs in comparison to conventional systems



*Tram spraying system*



*Control CWDS (Contact Wire De-icing)*

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### TROLLEY BUS

The ice formation of the overhead contact lines is a problem for the trolley bus operation as well.

For the contact line treatment with Pantotec DK a pantograph equipped pickup as shown below is a good solution. For application purpose the pantograph heads are converted into spraying devices which spray Pantotec DK at 35 bar against the catenary. Once applied in the early morning and if the contact lines are not idle for longer time the daily traffic of busses will make a further treatment unnecessary.

However, if night frost is probable, the treatment must be repeated.



*Pantograph converted to spray head*

### Reliable frost protection - de-icing of the contact lines:

#### Pantotec DK

Pantotec DK prevents the icing of the contact wire for trams, other rail vehicles with overhead lines and trolley buses during the winter months.

Pantotec DK is a mixture of glycols, polymers and additives. It does not form any gumming on the contact wire.

Pantotec DK has a very high adhesion and remains in dry weather over several days the contact wire.

After heavy rain or snow, the process is repeated.

#### Benefit

- 💧 has a very high adhesion
- 💧 does not form any gumming on the contact wire
- 💧 Application temperature <- 30°C.



Carrier liquid: 80 % degradable CEC-L-33-A-93

